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METHOD AND APPARATUS FOR CHANGING AN APPEARANCE OF MECHANICAL DEVICES DISPLAYED ON A GAMING MACHINE

by

Alfred Thomas

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METHOD AND APPARATUS FOR CHANGING AN APPEARANCE OF MECHANICAL DEVICES DISPLAYED ON A GAMING MACHINE

Field of the Disclosure

[0001] This invention is directed to gaming machines, and more particularly, to a method and apparatus for changing an appearance of mechanical devices displayed on a gaming machine.

Background

[0002] Wagering base games such as mechanically driven spinning reel slots, or electronically driven video slots, video poker, video blackjack, video keno, video bingo, video pachinko, and video lottery, etc., provided by gaming machines are well known in the gaming industry. Recently, special feature games have been used in conjunction with the base games to enhance player enjoyment and therefore encourage game play. Special feature games generally provide a greater chance of winning than the base games and therefore utilize different math models which yield more favorable player odds than the math models utilized for base games. The special feature game play, including bonus game play (where an additional wager is not required) and special secondary game play (where an additional wager may be required) may be similar to or completely different from the base game play.

[0003] Visual images provided by video displays are easily changed and therefore, the visual images displayed on a gaming machine during special feature game play are often different from visual images displayed during base game play. Among other things, this enables a player to easily differentiate

between special feature game play and base game play. As a result, player awareness is increased and base game play down-time is decreased, thereby minimizing revenue loses possibly incurred during special feature game play. In addition, gaming regulations in some jurisdictions require that a player must have the opportunity to visually differentiate between base game play and special feature game play when different math models are used for each; a differentiation easily accomplished by video gaming machines.

[0004] Mechanical devices displayed on gaming machines ("displayed mechanical devices"), including mechanical wheels, mechanical dice, mechanical spinning reels, etc., are often used in conjunction with special feature game play. Unlike the ease with which visual images provided by video displays are changed, the appearance of a displayed mechanical device is fixed and is therefore not easily changed. Thus, potential increases in a player's awareness are not available when displayed mechanical devices are utilized for special feature game play. In addition, gaming machines having displayed mechanical devices may not be compliant with certain gaming regulations requiring visual notification to the player when he/she moves between base and special feature game play.

Summary of the Invention

[0005] The present invention provides a method and apparatus for changing the appearance of a displayed mechanical device(s) on a gaming machine during special feature game play. Such an appearance change visually notifies a player when base game play is underway and when special feature game play is

underway. The special feature game may be a bonus game or any other secondary game offered by the gaming machine. The displayed mechanical device may be a plurality of mechanical spinning reels, a mechanical wheel, mechanical dice or any other mechanical device used for special feature game play. The method includes receiving a wager to play a wagering base game, detecting a first indication to play a special feature game and, in response to detecting the first indication, changing an appearance of the displayed mechanical device. Although the appearance change preferably includes changing a color of the displayed mechanical device using an illumination source, the appearance change may also include superimposing a colored filter or superimposing a video image upon the displayed mechanical device. The illumination source may include black-light, colored or white light emitting diodes (LEDs), organic light emitting diodes, incandescent bulbs or colored film used in conjunction with incandescent bulbs or LEDs. The colored LEDs may be single color LEDs or multicolor LEDs, for example dual-LEDs capable of producing two primary colors and a third combination color. The method further includes detecting a second indication to terminate play of the special feature game, and in response to detecting the second indication, restoring the appearance of the displayed mechanical device. If an illumination source is utilized to change the color of the displayed mechanical device, restoring the appearance of the displayed mechanical device is accomplished by de-illuminating the illumination source upon completion of special feature game play (*i.e.*, causing the illumination source to be in an off-state upon completion of special feature game

play). If a superimposed video image is utilized to change the appearance of the displayed mechanical device, restoring the appearance of the displayed mechanical device is accomplished by removing the superimposed video image.

[0006] Additional aspects of the invention will be apparent to those of ordinary skill in the art in view of the detailed description of various embodiments, which is made with reference to the drawings, a brief description of which is provided below.

Brief Description of the Drawings

[0007] FIGURE 1 is a perspective view of an embodiment of a gaming machine where the appearance of displayed mechanical devices is changed in accordance with the invention.

[0008] FIGURE 2 is an exemplary reel display area of the gaming machine of FIG. 1.

[0009] FIGURE 3 is a fragmentary view of the exemplary visual reel display area showing placement of a series of illumination sources configured behind the reel display area to illuminate reel symbols in accordance with an embodiment of the invention.

[0010] FIGURE 4 is a side view of an exemplary mechanical spinning mechanical reel that may be included in the gaming machine of FIG. 1 with portions broken away to reveal internal structure in accordance with an embodiment of the invention.

[0011] FIGURE 5 is a block diagram of the electronic components of the gaming machine of FIG. 1.

[0012] FIGURE 6 is a flowchart of an appearance changing routine that may be performed during operation of the gaming machines of FIG. 1.

[0013] FIGURES 7-15 are a series of exemplary visual reel display areas that may be displayed during performance of the appearance changing routine of FIG. 6.

Description of the Preferred Examples

[0014] The description of the preferred examples is to be construed as exemplary only and does not describe every possible embodiment of the invention. Numerous alternative embodiments could be implemented, using either current technology or technology developed after the filing date of this patent, which would still fall within the scope of the claims defining the invention.

[0015] In general, the present invention provides a gaming machine having one or more displayed mechanical devices configured to allow a change to the appearance of the displayed mechanical device(s) in accordance with the invention. The displayed mechanical devices may include mechanical reels, mechanical wheels, mechanical dice, etc. In response to moving or transitioning between base game play (with base game mathematical odds) and special feature game play (typically with special feature mathematical odds more favorable to the player), visual changes or changes to the appearance of displayed mechanical devices are accomplished using any number of illumination sources including black-light, colored or white light emitting diodes (LEDs), organic LEDs (OLEDs), incandescent bulbs, and/or colored film or filter in conjunction with incandescent bulbs and/or LEDs. The colored LEDs may be

single color LEDs or multicolor LEDs, for example dual-LEDs capable of producing two primary colors and a third combination color. The illumination sources may be positioned in front of, behind, on top of, on the bottom of, on the sides of, or anywhere around the displayed mechanical devices, depending on the configuration of the gaming machine. The visual change to the appearance preferably includes altering or changing a color of the displayed mechanical device. The visual change may also include highlighting, front lighting or backlighting all or a portion of the displayed mechanical device, edge lighting the displayed mechanical device, darkening an area around the displayed mechanical device, or superimposing a colored filter (*e.g.*, colored film material) or superimposing a video image on the displayed mechanical device. A method and apparatus for superimposing a video image on mechanical reels is described in a United States Patent No. 6,517,433, entitled "Reel Spinning Slot Machine with Video Superimposed Image", naming Loose et al. as inventors, issued February 11, 2003 and herein incorporated by reference in its entirety.

[0016] As described below, the present invention is preferably implemented in a mechanical spinning reel slot machine. It is contemplated that the present invention may also be implemented in a video slot machine or in other types of video gaming machines having displayed mechanical devices utilized for special feature game play.

[0017] An advantageous feature of changing the appearance of mechanical devices displayed on a gaming machine in accordance with the invention is increased player awareness during special feature game play. Another

advantageous feature of changing the appearance of mechanical devices during special feature game play in accordance with the invention is compliance with gaming regulations requiring visual notification to a player when he/she moves from base game play to special feature game play and from special feature game play to base game play.

[0018] FIG. 1 is a perspective view of one possible embodiment of a gaming machine 10 where the appearance of displayed mechanical devices is changed in accordance with the invention. The gaming machine 10 may be any type of wagering gaming machine having displayed mechanical devices and therefore may have varying structures and methods of operation. For example, the gaming machine 10 may be a mechanical spinning reel gaming machine (with or without an arm mechanism) configured to play a base slot game and a special feature game using the mechanical reels, or it may be a video gaming machine having mechanical dice configured to play a video wagering game and a special feature game using the mechanical dice, and so on. For exemplary purposes, various elements of the gaming machine 10 are described below, but it should be understood that numerous other elements may exist and may be utilized in any number of combinations to create a variety of gaming machine types.

[0019] Referring to Fig. 1, the gaming machine 10 includes a cabinet 12 having a door 14 to provide access to the interior of the gaming machine 10. Attached to the door 14 are audio speaker(s) 17 and a belly glass area 18 that typically displays game theme artwork. The audio speaker(s) 17 may be used to generate a variety of sounds such as the sound of spinning slot machine reels, a

dealer's voice, music, announcements or any other audio related to the wagering game.

[0020] Also attached to the door 14 are a number of value input devices that allow a player to insert value for game play. The value input devices may include a coin slot acceptor 20 or a note acceptor 22 to input value to the gaming machine 10. The note acceptor 22 may accept value in any number of forms, including currency or a currency-sized paper ticket voucher inscribed with information such as a bar code representing value, the name of the casino, the date, etc. As used herein, the term "value" may encompass gaming tokens, coins, paper currency, ticket vouchers, credit or debit cards, smart cards, and any other object representative of value.

[0021] The gaming machine 10 may also include a player tracking area 23 having a card reader 24, a keypad 25 and a display 26. As will be appreciated by those of ordinary skill in the art, the player tracking area 23 may be located in any number of areas of the gaming machine 10. The display 26 may be implemented using a vacuum fluorescent display (VFD), a liquid crystal display (LCD), an LED display, and/or a touch screen to display information to a game player or casino employee. The card reader 24 may include any type of card reading device, such as a magnetic card reader, smart card reader or an optical card reader. The card reader 24 may be used to read data from a card (*e.g.*, a credit card, a player tracking card, a smart card, etc.) offered by a player. If provided for player tracking purposes, the card reader 24 may be used to read data from, and/or write data to, cards capable of storing data. Such data may include the identity

of a player, the identity of a casino, the player's gaming habits, etc. Once gathered, the data can be "mined" (*i.e.*, the data is sorted to identify patterns and establish relationships) for any number of purposes including administering player awards, distinguishing player preferences and habits, accounting, etc.

[0022] The gaming machine 10 also includes a main display device 31 for displaying a symbol array of artwork and blank symbols affixed to the mechanical spinning reels. The symbol array may include occurrences of non-winning symbol combinations where no value payout is awarded to the player, or occurrences of winning symbol combinations (reflected in a pay table) where value payouts are awarded to the player. In addition, the main display device 31 may display other mechanical devices or may display animation, 2-D images, 3-D images or digital video playback, to name a few.

[0023] In the case of a video gaming machine, the main display device 31 may be configured with a video display for displaying video game images (e.g., simulated reel symbols, simulated cards, simulated numbers, etc.). Such a video display may be implemented as a CRT, an LCD, a plasma display, or other type of video display suitable for use in a gaming machine, and may be configured with or without a touch screen. For example, in a video gaming machine offering a card game such as poker, the main display device 31 may include an LCD-TFT display displaying one or more cards.

[0024] For mechanical spinning reel slot machines, the main display device 31 may further include a reel display area adapted to display game information to a player while, at the same time, allowing a player to view a reel symbol array

provided by the stopped mechanical spinning reels. The game information displayed via the reel display area may include game denominations, available credits, pay lines, wagering information, and other suitable game information. When the mechanical spinning reels are rotated and stopped, the resulting symbol array in conjunction with game information displayed in the reel display area provide a game outcome and game status to the player.

[0025] For example, FIG. 2 is an exemplary reel display area 50 for a slot game, X-tra Hot 7's™, that may be included in the main display device 31. The exemplary reel display area 50 includes one pay line 51 superimposed across three mechanical spinning reels, a denomination indicator 52 for indicating a value-per-credit (*e.g.,* twenty-five cents per credit), a credit meter 53 for displaying a number of credits available for game play, a win meter 54 for displaying credits resulting from a winning symbol combination, a bet indicator 55 for displaying the number of credits wagered for a particular play, and an additional information display 56. The credit meter 53, the win meter 54, the bet indicator 55, and the additional information display 56 may be enabled via an array of light emitting diodes (LEDs), a cathode ray tube (CRT), an LCD, a plasma display, or any other type of suitable display.

[0026] FIG. 3 is a fragmentary view of the exemplary visual reel display area 50 showing placement of a plurality of illumination sources 60 behind the reel display area (*i.e.,* the interior side of the exemplary visual reel display area 50) to illuminate reel symbols in accordance with an embodiment of the invention. Each of the illumination sources 60 may include a series of white or colored

LEDs, or one or more white or colored incandescent lights affixed in a suitable manner to the interior side of the exemplary reel display area 50. Such LEDs or incandescent lights are configured to cast colored lighting upon the mechanical reels and therefore upon the reel symbol arrays displayed to the player during special feature game play. Thus, if white LEDs or white incandescent lights are utilized, colored film located between the LEDS or incandescent lights and the mechanical spinning reels can be added to provide color to the light cast upon the reels. In addition, if black-light sensitive ink is utilized for a portion of the reels symbols, the illumination sources 60 may be configured with black light to change the symbol appearance when the illumination sources 60 are activated during special feature game play. Although located behind the reel display area 50, above and below the displayed reel symbols, the illumination sources 60 may be located in any suitable position to illuminate reel symbols in accordance with an embodiment of the invention.

[0027] FIG. 4 is a side view of an exemplary mechanical spinning mechanical reel 62 that may be included in the gaming machine 10 with portions broken away to reveal internal structure in accordance with an embodiment of the invention. In addition to the illumination sources 60 providing front lighting, the exemplary mechanical spinning mechanical reel 62 further includes illumination sources 70 configured to provide backlighting to the exemplary mechanical spinning mechanical reel 62. The illumination sources 70 may be configured to as white LEDs or incandescent lights to simply backlight the reel symbols, or may be configured with both white and colored LEDs (*e.g.*, single color LEDs, dual

color LEDs) or incandescent lights to provide backlighting during base slot game play and colored backlighting during special feature game play in accordance with an embodiment of the invention.

[0028] Referring again to FIG. 1, the gaming machine 10 may also include a top box 34 having additional speaker(s) 36 and a top box display device 38. Although not separately illustrated, the top box may also include a camera, a microphone, and/or a displayed mechanical device. The top box display device 38 may enable a number of game enhancements such as bonus games, interactive tournament games, progressive jackpot games, etc. In the case of a mechanical spinning reel slot machine, the top box display device 38 may be a static display configured to display award information such as pay tables for base or special feature games via glass art.

[0029] The gaming machine 10 may also include a player control panel 44. The player control panel 44 may be provided with a number of pushbuttons or touch-sensitive areas (*i.e.*, touch screen) that may be pressed by a player to select games, make wagers, make gaming decisions, etc. As used herein, the term "button" is intended to encompass any device that allows a player to make an input, such as a mechanical input device that must be depressed to make an input selection or a display area that a player may simply touch. The number of pushbuttons may include one or more "Bet" buttons for wagering, a "Max Bet" button for making the maximum wager allowable for the game, a "Play" button for beginning pay, a "Repeat" button for repeating the previous wagering selection, a "Collect" button for terminating play and cashing out of the game, a "Help" button

for viewing a help screen, a "See Pays" button for causing the main display device 31 to generate one or more display screens showing the odds or payout information for the game or games provided by the gaming machine 10, and a "Call Attendant" button for calling an attendant. Further, although the control panel 44 is shown to be separate from the main display device 31, it should be understood that the control panel 44 could be generated by the main display device 31 as a touch-sensitive screen.

[0030] The player control panel 44 may further include a number of wager selection buttons that allow a player to specify a wager amount for each pay line selected (via selecting multiple amounts of the smallest wager accepted). In addition, the gaming machine 10 may include a number of pay line selection buttons that allow the player to select one of a number of possible of pay lines prior to spinning the reels. For example, five selection buttons may be provided to allow a player to select one, three, five, seven or nine pay lines prior to each reel spin. If required, additional buttons such as a bonus button 19 may be provided on the player control panel 44 for special feature game play.

Options for Changing the Appearance of Displayed Mechanical Devices

[0031] Although not separately illustrated in FIG.1, the gaming machine 10 may also include illumination sources such as black-light, colored or white LEDs, OLEDs, incandescent bulbs, and/or colored film in conjunction with incandescent bulbs or LEDs. The illumination sources may be positioned in front of, behind, on top of, on the bottom of, on the sides of, or anywhere around displayed mechanical devices (*e.g.*, mechanical spinning reels) of the gaming machine 10,

depending on the configuration of the gaming machine. When activated, one or more of the aforementioned illumination sources is configured to cause a visual change to the appearance of the displayed mechanical device(s). The visual change preferably includes changing a color of the displayed mechanical device however, the visual change may also include highlighting, front lighting or backlighting all or a portion of the displayed mechanical device, edge lighting the displayed mechanical device, darkening an area around the displayed mechanical device, or superimposing a colored filter or a video image upon the displayed mechanical device.

[0032] Referring again to FIG. 1, when a player inserts value in the gaming machine 10, a number of credits corresponding to the amount deposited are shown on a credit meter for example, on the credit meter 53 (FIG. 2). After depositing the appropriate amount of value and making a pay line(s) selection, the player can begin game play by pulling the mechanical arm or by pushing an appropriate button such as the Bet button, the Max Bet button, or the Play button on the player control panel 44. Additional details describing game play on the gaming machine 10 where the appearance of displayed mechanical devices is changed in accordance with the invention are included below (FIG. 6).

[0033] Fig. 5 is a block diagram of a number of components that may be incorporated in each of the gaming machine(s) 10 of FIG 1. Referring to Fig. 5, the gaming machine 10 includes a controller 200 that may comprise a program memory 202, a microcontroller-based platform or microprocessor (MP) 204, a random-access memory (RAM) 206 and an input/output (I/O) circuit 208, all of

which may be interconnected via a communications link, or an address/data bus 210. The microprocessor 204 is capable of controlling the display of images, symbols and other indicia such as characters, people, places, things, and faces of cards to be displayed. The RAM 206 is capable of storing event data (*e.g.*, coins-in, coins-out, games played) or other data used or generated during a base or special feature game play. The program memory 202 is capable of storing program code which controls the gaming machine 10 so that base or special feature game play can occur in accordance with applicable math models, game rules, and pay tables. Although the program memory is preferably implemented as a non-volatile read only memory (ROM), it could also be a flash or battery backed RAM in order for the program memory 202 to be updated by a coupled server or floor controller. For example, when a player transitions from base mechanical slot game play to special feature game play, the microprocessor 204, executing code in the program memory 202, causes the appearance of the mechanical reels to change by activating color-tinted front lighting to illuminate the mechanical reels.

[0034] It should be appreciated that although only one microprocessor 204 is shown, the controller 200 may include multiple microprocessors 204. For example, the controller 200 may include one microprocessor for executing low level gaming functions and another processor for executing higher level game functions such as some communications, security, maintenance, etc. Similarly, the memory of the controller 200 may include multiple RAMs 206 and multiple program memories 202, depending on the requirements of the gaming machine

10. Although the I/O circuit 208 is shown as a single block, it should be appreciated that the I/O circuit 208 may include a number of different types of I/O circuits. The RAM(s) 206 and program memory(s) 202 may be implemented as semiconductor memories, magnetically readable memories, and/or optically readable memories, etc. Further, the term "controller" is used herein to refer collectively to the program memory 202, the microprocessor 204, the RAM 206 and the I/O circuit 208.

[0035] Fig. 5 illustrates that multiple peripheral devices, depicted as peripheral devices 211, 212, and 214, may be operatively coupled to the I/O circuit 208. The peripheral devices may include a control panel with buttons, a coin slot acceptor, a note acceptor, a bill validator, a card reader, a keypad, a sound circuit driving speakers, a card reader display, a video display, a touch screen, a mechanical wheel, mechanical dice, etc. In the case of a spinning reel slot machine, the peripheral devices may include a number of electro-mechanical spinning reels and a mechanical arm similarly coupled to the I/O circuit 208. Although three peripheral devices are depicted, more or less peripheral devices may be included.

[0036] It should be appreciated that although the controller 200 is a preferable implementation of the present invention, the present invention also includes implementation via one or more application specific integrated circuits (ASICs), field programmable gate arrays (FPGAs), adaptable computing integrated circuits, one or more hardwired devices, or one or more mechanical devices. Furthermore, although the controller 200 preferably resides in the gaming

machine 10, the present invention includes providing some or all of its functions at another location such as a server coupled to the gaming machine 10.

[0037] One manner in which the gaming machine 10 may operate is described below in connection with one or more flowchart(s) which represents a number of portions or routines of one or more computer programs, which may be stored in one or more of the memories of the controller 200. The computer program(s) or portions thereof may also be stored remotely outside of the gaming machine 10 and may therefore control the operation from a remote location.

[0038] Traditionally the appearance of a displayed mechanical device on a gaming machine was not changed when a player transitioned between base game play and special feature game play. Thus, the player may not have been aware of the end of base game play and the beginning of special feature game play, particularly in those cases where base game play and special feature game play required the same player action (*e.g.*, initiating a reel spin). In addition, because of a lack of an ability to change the appearance of the displayed mechanical devices, manufacturers of certain gaming machines utilizing displayed mechanical devices for special feature game play are believed to have been precluded from selling their gaming machines in particular jurisdictions.

[0039] In accordance with an embodiment of the invention, the appearance of displayed mechanical devices of the gaming machine 10 is changed when the controller 200 detects an indication of a player transition from base game play to special feature game play, and vice versa. The indication may be based on a player selection or based on an occurrence of a triggering event (*e.g.*, an

occurrence of special symbol) during base game play. In one example, OLEDs placed around mechanical dice may be activated to illuminate when the controller 200 receives an indication that the player selects a button to suspend base game play and begin special feature game play utilizing the dice. In another example, a color of the mechanical reels of the gaming machine 10 is changed via illuminating tinted or colored front lighting when the controller 200 receives an indication that base game play is suspended due to a triggering event and special feature game play utilizing the mechanical reels is imminent.

[0040] FIG. 6 is a flowchart of an appearance changing routine 300 that may be performed by the controller 200 of the gaming machine or by another controller coupled to the gaming machine 10. The appearance changing routine 300 provides one example of changing the appearance of displayed mechanical devices (*e.g.*, mechanical reels) of the gaming machine 10 when a player moves from base game play (*e.g.*, mechanical slot game) to special feature game play (*e.g.*, a Can't Lose™ bonus game, described in United States Patent Application entitled "Gaming Machine Having a Player Time-Selectable Bonus Award Scheme", naming Alfred Thomas as inventor, filed June 30, 2003 and herein incorporated by reference in its entirety). Although discussed below in the context of a mechanical base slot game and the Can't Lose™ bonus game for illustrative purposes, it is contemplated the appearance changing routine 300 may be executed in conjunction with any number of other wagering games provided by gaming machines utilizing displayed mechanical devices for special feature game play.

[0041] Referring to FIG. 6, the appearance changing routine 300 begins operation when the controller 200 detects a wager for base game play (step 302). Detection of a wager includes detecting a value input, detecting a bet, and detecting game play initiation by a player. The controller 200 detects the value input when a player deposits one or more of coins, paper currency, a card, or a voucher into a value input device of the gaming machine 10. When the controller 200 detects the value input, a number of credits corresponding to the amount deposited are displayed on a credit meter of the main display device 31, for example, on the credit meter 53. After value input detection, the controller 200 enables game play. In the illustrated example of a base slot game, game play may begin with pay line selection by the player. If there is more than one pay line, the controller 200 enables a bet-per-pay line selection. If selected, the bet-per-pay line selection is displayed to the player via a bet meter (*e.g.*, the bet meter 55) on the gaming machine 10. In addition, the controller 200 provides the player with an option to select a maximum bet (via a "Max Bet Spin" button). Thus, the player may choose the maximum bet option causing maximum pay line selection and maximum credits rather than the pay line selection and the bet per pay line selection.

[0042] Upon detecting the pay line(s) and bet-per-pay line selections (if applicable) and verifying the value input, the controller 200 enables (step 304) play of the base game; in the illustrated example, enabling reel spin. The player may spin the reels of a slot game by depressing a button such as a "Spin Reels" pushbutton provided on the player control panel 44 or by pulling a handle if

provided on the gaming machine 10. In either case, the controller 200, having determined a game outcome based on operation of a pseudo random generator device, stops the reels such that they display a symbol array representing the game outcome.

[0043] If the symbol array displayed by the stopped reels includes one of the winning symbol combinations displayed on a pay table, the controller 200 credits (step 306) the player with a value payout associated with the displayed winning symbol combination. The additional value payout is reflected as credits on a credit meter (*e.g.,* the credit meter 53). If the symbol array displayed by the stopped reels does not include one of the winning symbol combinations displayed on a pay table, no value payout is credited to the player.

[0044] In addition the controller 200 determines whether an indication to initiate special feature game play has been detected (step 308). In some cases, the time of initiating special feature game play is determined by the controller 200 based on a triggering event occurring during base game play. In the illustrated example, however, the time of redemption of accrued winning outcomes, and therefore special feature game play, is determined by the player via selection of a Can't Lose™ bonus button. If no indication to initiate special feature game play is detected by the controller 200, the player is given an option to continue base game play (step 320) when another wager is detected (step 302). If another wager is not detected, the controller 200 may detect selection of a cash-out option by the player, for example, via selection of the "Collect" button provided on the gaming machine 10 and respond by dispensing remaining value to the player

(step 322). The value may be dispensed as coins, paper currency, a credit on a card, or a voucher indicating credit, depending on operation of the gaming machine 10 and the player's preferences.

[0045] If the controller 200 detects an indication to initiate special feature game play, the controller 200 activates the appropriate black-lights, colored or white LEDs, OLEDs, incandescent bulbs, etc. to cause a change to the appearance of displayed mechanical devices (step 310). As mentioned above, the indication may be based on a player selection or based on an occurrence of a triggering event during base game play. In the illustrated example, when the controller 200 detects player selection of the Can't Lose™ bonus button, the controller 200 preferably causes activation of colored front lighting. The colored front lighting is configured to cast a color upon the mechanical reels to change the appearance of the mechanical reel symbols displayed in the exemplary reels display area 50. The changed appearance of the mechanical reel symbols visually notifies the player that Can't Lose™ bonus game play (having more favorable mathematical odds) has been initiated, and that the player should play accordingly. The controller 200 causes the reels to spin and then stop to display a winning symbol combination associated with Can't Lose™ bonus game play (step 312) and award the player accordingly.

[0046] During play of the special feature game, the appearance of the displayed mechanical device remains changed from its appearance during base game play. In the illustrated example, the colored front lighting remains activated to maintain the changed reel appearance during Can't Lose™ bonus game play. As a result,

a winning symbol combination displayed during the Can't Lose™ bonus game is a different color than the same winning symbol combination displayed during base slot game play. In addition, because both the base slot game and the Can't Lose™ bonus game require the same player action, initiating a reel spin, visual notification to the player of the transition to special feature game play is desirable.

[0047] Referring again to FIG. 6, upon receiving an indication to end special feature game play (step 314), the controller 200 causes the appearance of the displayed mechanical device to be restored to its base game play appearance (step 316). Thus, when the controller 200 detects an indication signifying the end of special feature game play, the controller 200 deactivates the appropriate black-lights, colored or white LEDs, OLEDs, incandescent bulbs, etc. to restore the displayed mechanical device(s) to a base game play appearance. In the illustrated example, the indication to end Can't Lose™ bonus game play may be detection of player selection of the Max Bet button or the Spin Reels button indicating that he/she is no longer redeeming winning outcome(s) and is instead wagering for base slot game play. Alternatively, the indication to end Can't Lose™ bonus game play may be player selection of the Cash Out button indicating that he/she is ending all game play on the gaming machine 10. Thus when the controller 200 detects an indication signifying the end of special feature game play, the controller 200 deactivates the colored front lighting.

[0048] For example, FIGs. 7-15 are a series of exemplary visual reel display areas that may be displayed during performance of the appearance changing

routine 300 described above. Although Can't Lose™ bonus game play is used for illustrative purposes, it is contemplated that any other bonus games utilizing displayed mechanical devices may be used.

[0049] Referring to FIG. 7, the exemplary reel display area 402 includes one pay line 403, a denomination indicator 404 for indicating a value-per-credit, a credit meter 405 for displaying a number of credits available for game play, a win meter 406 for displaying credits resulting from a winning symbol combination, a bet indicator 407 for displaying the number of credits wagered for a current game. Also included in the exemplary reel display area 402 are a "Spin Reels" button 408, a "Max Bet" button 409, a "Cash Out" button 410, and the bonus game button 419. The bonus game button 419 includes a counter display 421 and a feature name, (*i.e.*, "Can't Lose") and is adapted to enable a player who has accumulated winning outcomes, to redeem the winning outcomes at a time of his/her choosing (*i.e.*, Can't Lose™ bonus game play). The counter display 421 increments each time a winning outcome is accrued during base slot game play and decrements each time the winning outcome is redeemed during Can't Lose™ bonus game play.

[0050] In the illustrated example, the credit meter 405 displays 696 available credits for additional base slot game play, the win meter 406 displays no credits indicating that the player did not get a winning symbol combination, and the counter display 421 on the bonus game button 419 displays seven accrued winning outcomes.

[0051] As a result of a "Spin Reels" selection by the player during base slot game play (FIG. 8), the reels spin (FIG. 9) and then stop (FIG. 10), yielding another accrued winning outcome. The additional winning outcome is reflected on the counter display 421 as eight accrued winning outcomes. The credit meter 405 displays 693 available credits for additional game play and the win meter 406 displays no credits indicating that the player did not get a winning symbol combination.

[0052] As mentioned above, the Can't Lose™ bonus game allows the player to choose a time to redeem accumulated winning outcomes. When the player chooses to redeem a winning outcome (FIG. 11), the player selects the bonus game button 419 (*i.e.,* indicates initiation of special feature game play). Upon detecting selection of the bonus game button 419, the controller 200 causes colored front lighting to be activated (*i.e.*, activates an appearance change to the mechanical reels) thereby changing the appearance of the mechanical reels displayed in the exemplary reels display area 402 (FIG. 12). The controller 200 also causes the reels to spin and stop (FIG. 13) to display a winning symbol combination (*e.g.*, 2 triple bars and 1 single bar) and the counter display 421 is decremented by one, yielding seven remaining winning outcomes. As a result of the winning symbol combination, the number of available credits is increased by five from 693 to 698 credits.

[0053] Continuing with the example, the player selects the Spin Reels button (FIG. 14) indicating a desire to resume base slot game play. Upon detection of selection of Spin Reels button, the controller 200 causes the colored front lighting

to be deactivated (*i.e.*, deactivates an appearance change to the mechanical reels) thereby restoring the appearance of the mechanical reels to their base slot game play appearance. In addition, the controller 200 causes the reels to spin (FIG. 15) and stop as discussed in connection with FIGs. 9 and 10. Thus, in the illustrated example, the appearance of the mechanical reels is changed from a base game appearance to a special feature game appearance when a player transitions from base slot game play to Can't Lose™ game play, and is restored to the base game appearance when the player transitions from Can't Lose™ game play to base slot game play.

[0054] As may be apparent from the discussion above, the present invention providing an appearance change to a displayed mechanical device(s) on a gaming machine provides visual player notification that special feature game play is underway rather than base game play. The appearance change is activated when the player transitions from base game play to special feature game play and continues during special feature game play. The appearance of the displayed mechanical device(s) is restored when the player transitions from special feature game play to base game play.

[0055] From the foregoing, it will be observed that numerous variations and modifications may be affected without departing from the scope of the novel concept of the invention. It is to be understood that no limitations with respect to the specific methods and apparatus illustrated herein is intended or should be inferred. It is, of course, intended to cover by the appended claims all such modifications as fall within the scope of the claims.